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ABSTRACT

Research suggests that males tend to have a more positive attitude toward computers than do females; that males outnumber females in computer camps; and that males have greater access to, and report more frequent use of, computers at home than do females. It has been suggested that these findings may be based on sex role differences and not on gender differences. Gender and sex role differences in computer attitudes and experience were studied in 166 college students who completed the Computer Attitude Scale; the Personal Attributes Questionnaire to determine sex role orientation; and questions about demographics, computer experience, and future expectations. The results revealed that males had a more positive attitude toward computers than did females, although the difference was not significant. Males did report using computers more frequently than did females. Regular use of computers in school and at home were related to positive computer attitudes. The expectation that computer skills will be necessary in a subject's future occupation varied as a function of sex role. These findings support other research indicating gender differences in regard to attitudes, use, and expectations about computers, and suggest some sex role differences in computer attitudes and expectations. (NB)

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GENDER AND SEX ROLE DIFFERENCES IN COMPUTER ATTITUDES AND EXPERIENCE

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Abstract

Gender and sex role differences in computer attitudes and experience were studied in a sample of college students. Subjects were given the Computer Attitude Scale, a sex role instrument (PAQ), and questions about their computer use. As expected, males were using computers more often and had a more positive attitude toward computers than females. The expectation that computer skills will be necessary in subjects' future occupation varied as a function of sex role.

Introduction

Several studies have found that males tend to have a more positive attitude toward computers than females (Nickell and Pinto, in press; Wilder, Machie & Cooper, 1985). Studies have found that males outnumbered females in computer camps by a margin of 3:1 (Hess & Miura, 1985), and males have greater access to and report more frequent use of computers at home than do females (Lockheed, 1985). It has been suggested that these findings may be based on sex role differences and not gender differences. Wilder et al. (1985) found that K-12 boys and girls perceive the computer to be more appropriate for boys than for girls. Albert (1986) found that males and females who were androgynous report greater interest in computers and confidence in learning computer skills. The present study tests the effects of sex roles and gender differences on computer attitudes, future expectations, and computer related experience.

Method

The Computer Attitude Scale (CAS) (Nickell & Pinto, in press) and the Personal Attributes Questionnaire (PAQ) (Spence & Helmreich, 1978) were administered to 60 males and 106 females at a midwestern university. The CAS measures attitudes toward computers in society, with low scores indicating a negative attitude and high scores indicating a positive attitude. The PAQ was used as a measure of subjects' sex role orientation. Using a median split, subjects were placed into one of four sex-role categories: Masculine, Feminine, Androgynous, and Undifferentiated. In addition, demographic items, information regarding computer related experience, and questions related to future expectations were collected. It was expected that students categorized as Masculine would score higher on the CAS than those categorized as Feminine. It was also expected that males would have more experience with computers than females in terms of usage, and classes.

Results

Table 1 presents summary statistics on the results of this study. Results showed that males (M = 75.2) had a more positive attitude toward computers than females (M = 73.3) but it was not significant (p <.07). Males also reported that they were using computers more frequently than females (p < .03). The more subjects use computers, the more positive was their attitude (p<.03). Regular use of computers in school and at home were also related to more positive computer attitudes. Males had more positive expectations than females that using computers would: (1) make it easier to complete their undergraduate education (p < .01); (2) help them get a job after graduation (p < .05); and (3) make them more money in the future (p < .01). Neither gender or sex role differences were found in whether or not subjects had taken a computer class. A comparison of sex role orientation and computer attitudes found that Masculine subjects had a significantly more positive attitude (M = 77.4) than Feminine subjects (M = 73.3), Androgynous subjects (M = 73), or Undifferentiated subjects (M = 74.2). Masculine subjects had a more positive expectation than Feminine subjects that computer knowledge and ability will be necessary in their future occupation (p <.04).

Discussion

The present study supports other research that indicates gender differences in regard to attitudes, use, and expectations about computers. In addition, some sex role differences were found in computer attitudes and expectations. These differences may contribute to future occupational problems for women if they are not addressed. In 1980, only 31% of computer programmers and 22% of systems analysts were women (Lockheed, 1985), indicating a male dominated occupational field. Yet census statistics indicate that computer programmers and system analysts are two jobs with the largest projected increase in demand by 1995 (King, 1987). These findings imply that women must be encouraged to take computer

courses and to use computers in order to reverse the present trend toward a male dominated computer field. Fish, Gross, and Sanders (1986) found that intervention targeted at girls can increase voluntary computer usage. Brophy (1983) reports that some organizations are realizing that negative computer attitudes can limit the job mobility of women, and that seminars like those conducted by the Womens' Computer Literacy Project may be helpful.

References

Albert, M.A. (1986, May). Gender role orientation differences in computer interest, perceptions, and confidence. Paper presented at the Western Psychological Association, Seattle, WA.

Brophy, B. (1983, March 21) Computer Savvy: A career essential. USA Today, p. 3b.

Fish, M.C., Gross, A.L., & Sanders, J. S. (1986). The effect of equity strategies on girls' computer usage in school. Computers in Human Behavior, 2, 127-132.

Hess, R.D., & Miura, I.T. (1985). Gender differences in enrollment in computer camps and classes. Sex Roles, 13, 193-203.

King, G. (Ed.) .(1987) Statistical Abstract of the United States 1987. U.S. Government Printing Office.

Lockheed, M.E. (1985). Women, girls, and computers: A first look at the evidence. Sex Roles, 13, 115-122.

Nickell, G.S., & Pinto, J.N. (in press). The Computer Attitude Scale. Computers in Human Behavior.

Spence, J.T., & Helmreich, R.L. (1978) Masculinity and Femininity: Their psychological dimensions, correlates, and antecedents. Austin, TX: University of Texas Press.

Wilder, G., Mackie, D., & Cooper, J. (1985). Gender and computers: Two surveys of computer-reated attitudes. Sex Roles, 13, 215-228.

TABLE 1

COMPUTER ATTITUDES

	n	CAS Score
Total college sample	166	74.0
Sex		
Male	60	75.2
Female	106	73.3
Sex Role		
Masculine	23	77.3*
Feminine	49	73.4
Androgynous	53	73.0
Undifferentiated	41	74.2
Age		
Under 20	107	74.8
20-29	47	73.1
30-39	10	71.3
40-49	2	63.5
Taken a Computer Class		
Yes	135	74.0
No	31	73.9
Own a Personal Computer		
Yes	23	77.6**
No	143	73.4
Using Computers		
Not at all	35	69.5*
Very little	61	74.2
Occasionally	50	74.5
Quite often	17	79.5
All the time	3	82.0
Use regularly at School		
Yes	74	75.6*
No	92	72.8
Use regularly at Work		
Yes	13	77.1
No	153	73.7
Use regularly at Home		
Yes	18	78.4**
No	148	73.5

* $p < .05$ ** $p < .01$